

CLAIMS

The invention claimed is:

1. A comminuting device, comprising:
 - a support structure having an enclosure;
 - a set of intermeshing scissor rolls rotatably carried by the support structure;
 - at least two entrance openings provided in the enclosure; and
 - a bulkhead interposed between a first one of the entrance openings and a second one of the entrance openings so as to provide a first entrance chute and a second entrance chute, the bulkhead including a mouth portion configured to transfer scrap products between the first entrance chute and the second entrance chute.
2. The comminuting device of claim 1 further comprising a third entrance opening provided along a side of the enclosure and aligned with the mouth opening.
3. The comminuting device of claim 2 further comprising a conveyor duct communicating with the third entrance opening and configured to deliver scrap product into the enclosure with the mouth opening configured to prevent impediment of scrap product from entering the enclosure due to the bulkhead.
4. The comminuting device of claim 1 further comprising a feed roll configured to receive material from at least one of the entrance openings.

5. The comminuting device of claim 1 wherein the scissor rolls are driven in counter-rotation so as to draw waste material beneath and between the scissor rolls from an entrance nip beneath the scissor rolls to an exit nip about the scissor rolls.

6. The comminuting device of claim 1 wherein the bulkhead is supported in a substantially vertical configuration and the mouth portion is provided in a lower, free-edge of the bulkhead.

7. The comminuting device of claim 1 wherein the mouth portion is provided along a lower edge of the bulkhead.

8. The comminuting device of claim 7 wherein the mouth portion includes a cleft provided along a lower edge of the bulkhead.

9. The comminuting device of claim 1 wherein the first and second entrance chutes each extend in a substantially vertical orientation.

10. A plastic shredding machine, comprising:
a frame having an enclosure;
at least two intermeshing scissor rolls rotatably carried by the frame; and
at least three entrance openings provided in the enclosure each configured to deliver plastic into the enclosure for shredding between the scissor rolls.

11. The plastic shredding machine of claim 10 further comprising a baffle plate subdividing the enclosure into a first entrance duct and a second entrance duct.

12. The plastic shredding machine of claim 11 wherein the baffle plate comprises a clearance mouth intruding on the baffle plate.

13. The plastic shredding machine of claim 12 wherein a first entrance opening communicates with the first entrance duct, a second entrance opening communicates with the second entrance duct, and the clearance mouth is positioned in alignment with the third entrance opening to provide communication between the first entrance duct and the second entrance duct.

14. The plastic shredding machine of claim 13 wherein the first entrance opening is configured to receive a skeleton web from a trim press, the second entrance opening is configured to receive a formed web from a start-up operation, and the third entrance opening is configured to receive rejected articles from the trim press.

15. The plastic shredding machine of claim 12 wherein the baffle plate is substantially vertical and the clearance mouth comprises an arcuate cleft provided along a lower edge of the baffle plate.

16. The plastic shredding machine of claim 12 wherein the first entrance duct and the second entrance duct each have a substantially vertical orientation.

17. The plastic shredding machine of claim 10 further comprising an article conveyor communicating with one of the entrance openings and operative to deliver rejected articles into the shredding machine for comminuting.

18. The plastic shredding machine of claim 17 further comprising a divider wall provided within the enclosure having an opening centered with the one entrance opening to provide passage of rejected articles through the divider wall.

19. A recycling machine for solid material, comprising:
a frame providing an enclosure;
scissor rolls rotatably carried by the frame;
first and second entrance openings provided in the enclosure; and
a divider wall provided in the enclosure to provide at least in part a first entrance duct communicating with the first entrance opening and a second entrance duct communicating with the second entrance opening, and providing an opening between the first entrance duct and the second entrance duct.

20. The recycling machine of claim 19 wherein the opening in the divider wall comprises a clearance mouth provided along a lower edge of the divider wall.

21. The recycling machine of claim 20 wherein the clearance mouth comprises an arcuate cleft formed in a lower edge of the divider wall.

22. The recycling machine of claim 19 further comprising a third entrance opening provided in alignment with the arcuate cleft and configured to deliver rejected articles into the recycling machine in a manner that prevents the rejected articles from clogging against the divider wall.

23. The recycling machine of claim 22 wherein the divider wall subdivides the enclosure into a skeleton web entrance duct and a formed web entrance duct.

24. The recycling machine of claim 23 wherein the third entrance opening comprises a rejected article entrance duct communicating with the enclosure for delivering rejected articles into the recycling machine for subdividing.

25. The recycling machine of claim 24 further comprising a feed roll provided in the enclosure and configured to draw material from at least one of the ducts for delivery between the plurality of intermeshing scissor rolls.

26. The recycling machine of claim 25 wherein the plurality of scissor rolls comprises a pair of scissor rolls provided adjacent the feed roll and configured to draw waste material from an entrance nip beneath and between the scissor rolls to an exit nip above and between the scissor rolls.

27. The recycling machine of claim 26 further comprising a drive motor configured to drive the feed roll and the pair of scissor rolls.

28. The recycling machine of claim 19 wherein the divider wall comprises a cambered bulkhead having a contour configured to guide waste material into both the first entrance duct and the second entrance duct.

29. The recycling machine of claim 28 wherein the divider wall is bi-concave.

30. The recycling machine of claim 19 wherein the divider wall comprises a curved bulkhead having a cleft along a bottom edge.